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EXAMINER

MEW, KEVIN D.

ART UNIT

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2664

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Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                                    |  |
|------------------------------|-------------------------------|------------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>09/807,951 | Applicant(s) <b>KIKUCHI ET AL.</b> |  |
|                              | Examiner<br>Kevin Mew         | Art Unit<br>2664                   |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Detailed Action***

***Specification***

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In particular, the abstract exceeds 150 words in length. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5, 14-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyagi (USP 6,088,601).

Regarding claim 1, Miyagi discloses a CDMA mobile communication station (CDMA mobile communication device, see col. 1, lines 15-16, 30-32 and Fig. 7), comprising:

multicode transmission means for transmitting packet data relating to one call in CDMA mobile communication by wireless (controlled circuit 20a of the sound coder/decoder circuit for encoding sound data to be transmitted, see col. 1, lines 59-60) through a plurality of data channels (TCH1 and TCH2, see Fig. 1) by sharing predetermined control information (control data is multiplexed over encoded sound data, see col. 1, lines 25-27);

transmission power control means for controlling transmission power (power controlling means to turn the power on and off for the controlled circuit when encoding data to be transmitted, see col. 1, lines 59-67 and col. 2, lines 1-20) when the packet data is transmitted on a basis of an instruction to increase or decrease the transmission power from a communication partner station (turning the controlled circuit power on when receiving frame synchronization signal from the base station, see col. 2, lines 10-20) which receives the packet data transmitted by the multicode transmission means; and

transmission start control means (sound coder/decoder circuit, see col. 1, lines 59-66) for inhibiting a start of transmission by the multicode transmission means until the packet data is generated (comprises a silent judging means for making a judgement whether the sound data to be transmitted are silent data before encoding the sound data to be transmitted, see col. 1, lines 61-64) and for controlling the multicode transmission means (controlled circuit of the sound coder/decoder circuit for encoding sound data to be transmitted, see col. 1, lines 59-60 and controlled circuit 20a, Fig. 1) in a case where the packet data is generated (when sound data is not silent), so that transmission of the packet data is postponed for a predetermined time in a unit of the data channel and is started (during the cycle of frame synchronization, a counter clock is counted after receiving a frame synchronization pulse and a judgment is made by the silent

judgment means for causing the switching circuit to turn on when the sound data is determined to be not silent, see col. 2, lines 10-36).

Regarding claim 5, Miyagi discloses a CDMA mobile communication station (CDMA mobile communication device, see col. 1, lines 15-16, 30-32 and Fig. 7), comprising:

multicode transmission means for transmitting packet data relating to one call in CDMA mobile communication by wireless (controlled circuit 20a of the sound coder/decoder circuit for encoding sound data to be transmitted, see col. 1, lines 59-60) through a plurality of data channels (TCH1 and TCH2, see Fig. 1) by sharing predetermined control information (control data is multiplexed over encoded sound data, see col. 1, lines 25-27);

transmission power control means for controlling transmission power (power controlling means to turn the power on and off for the controlled circuit when encoding data to be transmitted, see col. 1, lines 59-67 and col. 2, lines 1-20) when the packet data is transmitted on a basis of an instruction to increase or decrease the transmission power from a communication partner station (turning the controlled circuit power on when receiving frame synchronization signal from the base station, see col. 2, lines 10-20) which receives the packet data transmitted by the multicode transmission means; and

transmission stop control means (switching circuit of the sound coder/decoder for powering off the circuit for encoding, see col. 1, lines 59-67) for transmission by the multicode transmission continuing means until the packet data transmitted by the multicode transmission means disappears (when the sound data to be transmitted are determined by the judging means to be silent data, see col. 1, lines 59-67) and for controlling the multicode

transmission means in a case where the packet data disappears, so that data transmission through the data channel is stopped at timings shifted from each other by a predetermined time in a unit of the data channel (during each cycle of frame synchronization, the circuit for encoding sound data is powered off when the data are detected to be silent data by the judging means, see col. 2, lines 25-36).

Regarding claim 14, Miyagi discloses a CDMA packet transmission method, wherein when packet data relating to one call in CDMA mobile communication by wireless (controlled circuit 20a of the sound coder/decoder circuit for encoding sound data to be transmitted, see col. 1, lines 59-60) through a plurality of data channels (TCH1 and TCH2, see Fig. 1) by sharing predetermined control information (control data is multiplexed over encoded sound data, see col. 1, lines 25-27), transmission is not started until the packet data is generated, and in a case where the packet data is generated, the transmission of the packet data is postponed for a predetermined time in a unit of the data channel and is started (during the cycle of frame synchronization, a counter clock is counted after receiving a frame synchronization pulse and a judgment is made by the silent judgment means for causing the switching circuit to turn on when the sound data is determined to be not silent, see col. 2, lines 10-36).

Regarding claim 15, Miyagi discloses a CDMA packet transmission method, wherein when packet data relating to one call in CDMA mobile communication by wireless (controlled circuit 20a of the sound coder/decoder circuit for encoding sound data to be transmitted, see col. 1, lines 59-60) through a plurality of data channels (TCH1 and TCH2, see Fig. 1) by

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sharing predetermined control information (control data is multiplexed over encoded sound data, see col. 1, lines 25-27), transmission is not stopped until the packet data to be transmitted disappears, and in a case where the packet data disappears (when the sound data to be transmitted are determined by the judging means to be silent data, see col. 1, lines 59-67), data transmission through the data channels is stopped at timings shifted from each other by a predetermined time in a unit of the data channel (during each cycle of frame synchronization, the circuit for encoding sound data is powered off when the data are detected to be silent data by the judging means, see col. 2, lines 25-36).

Regarding claim 16, Miyagi discloses a CDMA mobile communication station according to claim 3, wherein as the first data channel and/or the second data channel, one or plural channels can be set (data channel is provided with a constant set value to activate the switching circuit in order to power on the circuit for encoding data to be transmitted during the cycle of frame synchronization, see col. 1, lines 59-67 and col. 2, lines 20-36).

Regarding claim 17, a CDMA mobile communication station according to claim 4, wherein as the first data channel and/or the second data channel, one or plural channels can be set (data channel is provided with a constant set value to activate the switching circuit in order to power on the circuit for encoding data to be transmitted during the cycle of frame synchronization, see col. 1, lines 59-67 and col. 2, lines 20-36).

Regarding claim 18, Miyagi discloses a CDMA mobile communication station according to claim 6, wherein as the first data channel and/or the second data channel, one or plural channels can be set (data channel is provided with a constant set value to activate the switching circuit in order to power on the circuit for encoding data to be transmitted during the cycle of frame synchronization, see col. 1, lines 59-67 and col. 2, lines 20-36).

Regarding claim 19, Miyagi discloses a CDMA mobile communication station according to claim 7, wherein as the first data channel and/or the second data channel, one or plural channels can be set (data channel is provided with a constant set value to activate the switching circuit in order to power on the circuit for encoding data to be transmitted during the cycle of frame synchronization, see col. 1, lines 59-67 and col. 2, lines 20-36).

Regarding claim 20, Miyagi does not explicitly disclose a CDMA mobile communication station according to claim 8, wherein as the first data channel and/or the second data channel, one or plural channels can be set (data channel is provided with a constant set value to activate the switching circuit in order to power on the circuit for encoding data to be transmitted during the cycle of frame synchronization, see col. 1, lines 59-67 and col. 2, lines 20-36).



***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2-4, 6-13, 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyagi in view of Quick, Jr. (USP 5,673,259).

Regarding claim 2, Miyagi discloses a CDMA mobile communication station (CDMA mobile communication device, see col. 1, lines 15-16, 30-32 and Fig. 7) according to claim wherein the transmission start control means (sound coder/decoder circuit, see col. 1, lines 64-66) comprises:

packet detection means for detecting generation of the packet data (silent judging means for making a judgement whether the sound data to be transmitted are silent data before encoding the sound data to be transmitted, see col. 1, lines 61-64);

first transmission start means for in a state where the transmission start is suspended (when sound data is silent) until the generation of the packet data is detected by the packet detection means (until the sound data is determined to be not silent) and in a case where the generation of the packet data is detected by the packet detection means (silent judging means), controlling the multicode transmission means to start data transmission through a first of data channels (TCH1, see col. 1, lines 59-67 and col. 2, lines 1-36 and Fig. 7) among the plurality of channels; and

Miyagi does not explicitly show a second transmission start means for controlling the multicode transmission means in response to elapse of a predetermined time from the start of the data transmission through the first data channel by the first transmission start means and for starting data transmission through a second data channel different from the first data channel among the plurality of data channels.

However, Quick discloses that a mobile station will send packet data on the Reverse Packet Channel before it exceeds some set amount of time and send a Request Message on the Access Channel after the time expires (see col. 21, lines 34-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile communication device of Miyagi with the teaching of Quick in switching the transmission of data from a Reverse Packet Channel onto an Access channel after a predetermined period of time elapses such that there exists an additional transmitting means for transmitting data on a second channel when the predetermined time expires. The motivation to do so is to allow the mobile station to make a request message via the Access Channel to a base station for a user identification assignment in order for the mobile station to make a new reservation to send data.

Regarding claims 3 and 4, Miyagi discloses a CDMA mobile communication station (CDMA mobile communication device, see col. 1, lines 15-16, 30-32 and Fig. 7) according to claim 1 wherein the transmission start control means (sound coder/decoder circuit, see col. 1, lines 64-66) comprises:

packet detection means for detecting generation of the packet data (silent judging means for making a judgement whether the sound data to be transmitted are silent data before encoding the sound data to be transmitted, see col. 1, lines 61-64);

first transmission start means for in a state where the transmission start is suspended (when sound data is silent) until the generation of the packet data is detected by the packet detection means (until the sound data is determined to be not silent) and in a case where the generation of the packet data is detected by the packet detection means (silent judging means), controlling the multicode transmission means to start data transmission through a first of data channels (TCH1, see col. 1, lines 59-67 and col. 2, lines 1-36 and Fig. 7) among the plurality of channels; and

Miyagi does not explicitly show a second transmission start means for, in a case where an amount of the packet data to be transmitted reaches a predetermined transmission start threshold value or more, controlling the multicode transmission means to start data transmission through a second data channel different from the first data channel among the plurality of data channels.

However, Quick discloses a processor for use in a mobile station where switching is performed to switch from the random access channel to the dedicated channel when the bandwidth demand exceeds a threshold level (see col. 4, lines 22-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile communication device of Miyagi with the teaching of Quick in switching the transmission of data from the random access channel to a dedicated channel such that there exists a second transmission means for transmitting data to the dedicated

channel when the amount of data packets transmitted exceeds a threshold value. The motivation to do so is to share communication channel resources among a large number of bursty data packets transmitted by the unpredictable and variable demand of each mobile user.

Regarding claim 6, Miyagi discloses a CDMA mobile communication station (CDMA mobile communication device, see col. 1, lines 15-16, 30-32 and Fig. 7) according to claim wherein the transmission stop control means (switching circuit of the sound coder/decoder for powering off the circuit for encoding, see col. 1, lines 59-67) comprises:

packet detection means for detecting that the packet data transmitted by the multicode transmission means disappears (judging means for detecting silent data, see col. 1, lines 59-67);

first transmission stop means for, in a state where the transmission by the multicode transmission means continues until the packet detection means detects disappears (switching circuit of the sound coder/decoder for powering off the circuit for encoding, see col. 1, lines 59-67) and in a case where the packet detection means detects that the packet data disappears (silent data detected), controlling the multicode transmission means to stop the data transmission through the first data channel among the plurality of data channels (the circuit for encoding sound data is powered off before the data is encoded to be transmitted when the data are detected to be silent data by the judging means, see col. 1, lines 59-67 and col. 2, lines 25-36).

Miyagi does not explicitly show a second transmission stop means for controlling the multicode transmission means in response to elapse of a predetermined time from a stop of the data transmission through the first data channel by the first transmission stop means and for

stopping the data transmission through the second data channel different from the first data channel among the plurality of data channels.

However, Quick teaches that after data transmission from the random access channel to the dedicated channel is performed when the bandwidth demand exceeds a first threshold level, further switching is performed when the bandwidth demand drops below a second threshold level (see col. 4, lines 22-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile communication device of Miyagi with the teaching of Quick in switching the transmission of data from the random access channel to the dedicated channel such that after some time has elapsed following the switching from the first channel to the second channel, there exists a second transmission stop means to switch data transmission from the second channel back to the first channel when the bandwidth demand of this channel drops below a second threshold value. The motivation to do so is to share communication channel resources among a large number of bursty data packets transmitted by the unpredictable and variable demand of each mobile user.

Regarding claim 7, Miyagi discloses a CDMA mobile communication station (CDMA mobile communication device, see col. 1, lines 15-16, 30-32 and Fig. 7) according to claim 5, wherein the transmission stop control means (switching circuit of the sound coder/decoder for powering off the circuit for encoding, see col. 1, lines 59-67) comprises:

packet detection means for detecting that the packet data transmitted by the multicode transmission means disappears (judging means for detecting silent data, see col. 1, lines 59-67);

first transmission stop means for, in a state where the transmission by the multicode transmission means continues until the packet detection means detects disappears (switching circuit of the sound coder/decoder for powering off the circuit for encoding, see col. 1, lines 59-67) and in a case where the packet detection means detects that the packet data disappears (silent data detected), controlling the multicode transmission means to stop the data transmission through the first data channel among the plurality of data channels (the circuit for encoding sound data is powered off before the data is encoded to be transmitted when the data are detected to be silent data by the judging means, see col. 1, lines 59-67 and col. 2, lines 25-36); and

Miyagi does not explicitly show a second transmission stop means for, in a case where an amount of the packet data to be transmitted reaches a predetermined controlling the multicode transmission means to stop the data transmission through the second data channel different from transmission stop threshold value or less, the first data channel among the plurality of data channels.

However, Quick discloses a processor for use in a mobile station where switching is performed to switch from the random access channel to the dedicated channel when the bandwidth demand exceeds a threshold level (see col. 4, lines 22-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile communication device of Miyagi with the teaching of Quick in switching the transmission of data from the random access channel to a dedicated channel such that there exists a second transmission stop means to stop data transmission in a second channel when the amount of data packets transmitted through this second channel

exceeds a threshold value. The motivation to do so is to share communication channel resources among a large number of bursty data packets transmitted by the unpredictable and variable demand of each mobile user.

Regarding claim 8, Miyagi discloses all the aspects of the claimed invention set forth in the rejection of claim 7 above, except fails to explicitly show a CDMA mobile communication station according to claim 7, wherein the second transmission stop means stops the data transmission through the second data channel only in a case where a state in which the amount of the packet data to be transmitted is not larger than the transmission stop threshold value continues throughout a predetermined transmission stop time.

However, Quick discloses a processor for use in a mobile station where switching is performed to switch from the random access channel to the dedicated channel when the bandwidth demand exceeds a threshold level (see col. 4, lines 22-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile communication device of Miyagi with the teaching of Quick in switching the transmission of data from the random access channel to the dedicated channel such that there exists a second transmission stop means to stop data transmission in a second channel when the amount of data packets transmitted through this second channel reaches a transmission stop threshold value. The motivation to do so is to share communication channel resources among a large number of bursty data packets transmitted by the unpredictable and variable demand of each mobile user.

Regarding claim 9, Miyagi discloses a CDMA mobile communication station according to any one claims 2 to 4 and 6 to 8, wherein as the first data channel and/or the second data channel, one or plural channels can be set (data channel is provided with a constant set value to activate the switching circuit in order to power on the circuit for encoding data to be transmitted during the cycle of frame synchronization, see col. 1, lines 59-67 and col. 2, lines 20-36).

Regarding claim 10, Miyagi discloses a CDMA mobile communication system (see Fig. 7), comprising:

a first wireless station (CDMA mobile communication device, see col. 1, lines 15-16, 30-32 and Fig. 7) including multicode transmission means for transmitting packet data relating to one call in CDMA mobile communication by wireless (controlled circuit 20a of the sound coder/decoder circuit for encoding sound data to be transmitted, see col. 1, lines 59-60) through a plurality of data channels (TCH1 and TCH2, see Fig. 1) by sharing predetermined control information (control data is multiplexed over encoded sound data, see col. 1, lines 25-27), and transmission power control means for controlling transmission power (power controlling means to turn the power on and off for the controlled circuit when encoding data to be transmitted, see col. 1, lines 59-67 and col. 2, lines 1-20) when the packet data is transmitted on a basis of an instruction to increase or decrease the transmission power from a communication partner station (turning the controlled circuit power on when receiving frame synchronization signal from the base station, see col. 2, lines 10-20) which receives the packet data transmitted by the multicode transmission means; and



wherein the first wireless station further comprises transmission start control means (sound coder/decoder circuit, see col. 1, lines 59-66) for inhibiting a start of transmission by the multicode transmission means until the packet data is generated (comprising a silent judging means for making a judgement whether the sound data to be transmitted are silent data before encoding the sound data to be transmitted, see col. 1, lines 61-64) and for controlling the multicode transmission means (controlled circuit of the sound coder/decoder circuit for encoding sound data to be transmitted, see col. 1, lines 59-60 and controlled circuit 20a, Fig. 1) in a case where the packet data is generated (when sound data is not silent), so that transmission of the packet data is postponed for a predetermined time in a unit of the data channel and is started (during the cycle of frame synchronization, a counter clock is counted after receiving a frame synchronization pulse and a judgment is made by the silent judgment means for causing the switching circuit to turn on when the sound data is determined to be not silent, see col. 2, lines 10-36).

Miyagi does not explicitly show a second wireless station including reception means for receiving the packet data transmitted by wireless from the first wireless station, and transmission power instruction means for instructing the first wireless station to increase, or decrease the transmission power by a predetermined constant value on a basis of power of specific packet data received by the reception means and power of packet data other than the specific packet data received by the reception means.

However, Quick discloses that a mobile unit will receive a command signal from a base station for adjusting the transmission power of the mobile unit (see col. 10, lines 20-40) based on the cell-site transmitted signal power received by the remote unit and the mobile unit transmitted

signal power received at the cell site so as to maintain the transmitted signal at the threshold power level (see col. 10, lines 5-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile communication system of Miyagi with the teaching of Quick in adjusting the transmitted power of the mobile unit such that the mobile unit will receive a command signal from a base station to adjust the mobile unit's transmitted power accordingly. The motivation to do so is to optimize the efficiency of the transmission and to maintain a sufficient power level so as to prevent losing any of the data being transmitted.

Regarding claim 11, Miyagi discloses a CDMA mobile communication system comprising:

a first wireless station (CDMA mobile communication device, see col. 1, lines 15-16, 30-32 and Fig. 7) including multicode transmission means for transmitting packet data relating to one call in CDMA mobile communication by wireless (controlled circuit 20a of the sound coder/decoder circuit for encoding sound data to be transmitted, see col. 1, lines 59-60) through a plurality of data channels (TCH1 and TCH2, see Fig. 1) by sharing predetermined control information (control data is multiplexed over encoded sound data, see col. 1, lines 25-27), and transmission power control means for controlling transmission power (power controlling means to turn the power on and off for the controlled circuit when encoding data to be transmitted, see col. 1, lines 59-67 and col. 2, lines 1-20) when the packet data is transmitted on a basis of an instruction to increase or decrease the transmission power from a communication partner station (turning the controlled circuit power on when receiving frame synchronization signal from the

base station, see col. 2, lines 10-20) which receives the packet data transmitted by the multicode transmission means; and

wherein the first wireless station further comprises transmission stop control means (switching circuit of the sound coder/decoder for powering off the circuit for encoding, see col. 1, lines 59-67) for transmission by the multicode transmission continuing means until the packet data transmitted by the multicode transmission means disappears (when the sound data to be transmitted are determined by the judging means to be silent data, see col. 1, lines 59-67) and for controlling the multicode transmission means in a case where the packet data disappears, so that data transmission through the data channel is stopped at timings shifted from each other by a predetermined time in a unit of the data channel (during each cycle of frame synchronization, the circuit for encoding sound data is powered off when the data are detected to be silent data by the judging means, see col. 2, lines 25-36).

Miyagi does not explicitly show a second wireless station including reception means for receiving the packet data transmitted by wireless from the first wireless station, and transmission power instruction means for instructing the first wireless station to increase or decrease the transmission power by a predetermined constant value on a basis of power of specific packet data received by the reception means and power of packet data other than the specific packet data received by the reception means.

However, Quick discloses that a mobile unit will receive a command signal from a base station for adjusting the transmission power of the mobile unit (see col. 10, lines 20-40) based on both the cell-site transmitted signal power received by the remote unit and the mobile unit

transmitted signal power received at the cell site so as to maintain the transmitted signal at the threshold power level (see col. 10, lines 5-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile communication system of Miyagi with the teaching of Quick in adjusting the transmitted power of the mobile unit such that the mobile unit will receive a command signal from a base station to adjust the mobile unit's transmitted power accordingly. The motivation to do so is to optimize the efficiency of the transmission and to maintain a sufficient power level so as to prevent losing any of the data being transmitted.

Regarding claim 12, Miyagi does not explicitly disclose a CDMA mobile communication system according to claim 10 or 11, wherein

the first wireless station is a base station,

the second wireless station is a plurality of mobile stations,

the specific packet data is packet data to its own station, and

the packet data other than the specific packet data is packet data to another mobile station

However, Quick discloses that the base station identifies the power level of individual users and thereby to their control power levels by using a unique specific long code for each of the mobile users (see col. 10, lines 5-53) and also that a mobile unit will receive a command signal from a base station for adjusting the transmission power of the mobile unit (see col. 10, lines 20-40) based on both the cell-site transmitted signal power received by the remote unit and the mobile unit transmitted signal power received at the cell site so as to maintain the transmitted signal at the threshold power level (see col. 10, lines 5-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile communication system of Miyagi with the teaching of Quick in adjusting the transmitted power of the mobile unit such that the mobile unit will receive a command signal from a base station to adjust the mobile unit's transmitted power accordingly based identifying the power level of the users by using the unique long code assigned to the each user. The motivation to do so is to allow the base station to use the long code to distinguish the transmissions of one user from those of other users when determining and controlling the power level transmitted by individual users.

Regarding claim 13, Miyagi does not explicitly disclose a CDMA mobile communication system according to claim 10 or 11, wherein

the first wireless station is a plurality of mobile stations,

the second wireless station is a base station,

the specific packet data is packet data transmitted from the mobile station connected to a specific call (the mobile unit transmitted signal power received at the cell site, see col. 10, lines 5-40), and

the packet data other than the specific packet data is packet data transmitted from the mobile station connected to a call other than the specific call.

However, Quick discloses that the base station identifies the power level of individual users and thereby to their control power levels by using a unique specific long code for each of the mobile users (see col. 10, lines 5-53) and also that a mobile unit will receive a command signal from a base station for adjusting the transmission power of the mobile unit (see col. 10,

lines 20-40) based on both the cell-site transmitted signal power received by the remote unit and the mobile unit transmitted signal power received at the cell site so as to maintain the transmitted signal at the threshold power level (see col. 10, lines 5-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile communication system of Miyagi with the teaching of Quick in adjusting the transmitted power of the mobile unit such that the mobile unit will receive a command signal from a base station to adjust the mobile unit's transmitted power accordingly based identifying the power level of the users by using the unique long code assigned to the each user. The motivation to do so is to allow the base station to use the long code to distinguish the transmissions of one user from those of other users when determining and controlling the power level transmitted by individual users.

Regarding claim 21, Miyagi does not explicitly disclose a CDMA mobile communication station according to claim 12, wherein

the first wireless station is a base station,  
the second wireless station is a plurality of mobile stations,  
the specific packet data is packet data to its own station, and  
the packet data other than the specific packet data is packet data to another mobile station.

However, Quick discloses that the base station identifies the power level of individual users and thereby to their control power levels by using a unique specific long code for each of the mobile users (see col. 10, lines 5-53) and also that a mobile unit will receive a command

signal from a base station for adjusting the transmission power of the mobile unit (see col. 10, lines 20-40) based on both the cell-site transmitted signal power received by the remote unit and the mobile unit transmitted signal power received at the cell site so as to maintain the transmitted signal at the threshold power level (see col. 10, lines 5-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile communication system of Miyagi with the teaching of Quick in adjusting the transmitted power of the mobile unit such that the mobile unit will receive a command signal from a base station to adjust the mobile unit's transmitted power accordingly based identifying the power level of the users by using the unique long code assigned to the each user. The motivation to do so is to allow the base station to use the long code to distinguish the transmissions of one user from those of other users when determining and controlling the power level transmitted by individual users.

Regarding claim 22, Miyagi does not explicitly disclose a CDMA mobile communication system according to claim 12, wherein

the first wireless station is a plurality of mobile stations,

the second wireless station is a base station,

the specific packet data is packet data transmitted from the mobile station connected to a specific call, and

the packet data other than the specific packet data is packet data transmitted from the mobile station connected to a call other than the specific call.

However, Quick discloses that the base station identifies the power level of individual users and thereby to their control power levels by using a unique specific long code for each of the mobile users (see col. 10, lines 5-53) and also that a mobile unit will receive a command signal from a base station for adjusting the transmission power of the mobile unit (see col. 10, lines 20-40) based on both the cell-site transmitted signal power received by the remote unit and the mobile unit transmitted signal power received at the cell site so as to maintain the transmitted signal at the threshold power level (see col. 10, lines 5-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile communication system of Miyagi with the teaching of Quick in adjusting the transmitted power of the mobile unit such that the mobile unit will receive a command signal from a base station to adjust the mobile unit's transmitted power accordingly based identifying the power level of the users by using the unique long code assigned to the each user. The motivation to do so is to allow the base station to use the long code to distinguish the transmissions of one user from those of other users when determining and controlling the power level transmitted by individual users.

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***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure with respect to CDMA packet transmission method.

US Patent 4,901,307 to Gilhousen et al.

US Patent 6,075,792 to Ozluturk

US Patent 6,085,107 to Persson et al.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Mew whose telephone number is 571-272-3141. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

